Stephanie Carr/R1/USEPA/US

08/11/2008 03:36 PM

To R1 Records-Ctr-RCRA@epa
cc
bcc
Subject Fw: Wampus - Response to EPA Questions

----- Forwarded by Stephanie Carr/R1/USEPA/US on 08/11/2008 03:36 PM -----

Jim.Pfeifer@erm.com

02/07/2007 02:09 PM

To Gennady Shteynberg <gennady.shteynberg@po.state.ct.us>
cc director@raquettelake.com, Stephanie Carr/R1/USEPA/US@EPA, Mike.Teetsel@erm.com
Subject Wampus - Response to EPA Questions

Gene, attached is our formal response to the questions posed by EPA regarding the status of the Wampus project (building piece - lot 1).

epa - dep response_20070208040747.pdf

Environmental Resources Management

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7 February 2007

Mr. Gennady Shteynberg
Connecticut Department of Environmental Protection
Bureau of Water Protection and Land Reuse
Remediation Division
79 Elm Street
Hartford, CT 06106

Re: Responses to EPA Comments Regarding Lot 1 AOCs
Former Framatome Facility
80 Wampus Lane, Milford, Connecticut

Dear Mr. Shteynberg:

On behalf of JMG Milford Realty, LLC (JMG), Environmental Resources Management (ERM) has prepared this letter to address comments provided by the United States Environmental Protection Agency (EPA) regarding the above referenced property. These comments were conveyed to JMG in your e-mail dated 17 October 2006. For your convenience, each EPA comment is first listed, followed by JMG's response.

Former MOH Sludge landfill (AOC 2): Excavation was performed in 1997 and 2002. 2 post-excavation samples in 2002 (SE2-base and SE2-W contained cadmium at levels > GB PMC. Therefore, further excavation is likely to comply w/ PMC.

The two samples referenced above contained total cadmium at a concentration exceeding the residential DEC, but below the Industrial/Commercial DEC. The sample containing the highest concentration of total cadmium (SE2-W) was further analyzed using the SPLP method to assess the leachable cadmium for comparison to the GB Pollutant Mobility Criteria (GB PMC). This sample contained cadmium at a concentration of 0.073 mg/l, slightly above the GB PMC of 0.05. This minor exceedances of this numerical criteria is not significant for the following reasons:

- This soil sample originated from below the seasonal high water table, and therefore the PMC do not apply to this soil;
- The other soil samples collected in this AOC, including many from above the seasonal high water table, exhibited lower total cadmium levels. The soil in this AOC is similar throughout, and is expected to exhibit similar leaching potential. Therefore, leachable cadmium levels are expected to

be lower than the concentration detected in this one sample;

- ERM will monitor groundwater for a minimum of two years as part of the Site closure under the RSRs confirming this assessment.

No additional investigation or remediation work is required in this AOC.

Former Underground Storm and Wastewater Piping (AOC 3) was removed in April 2002. Sampling performed below waste lines found elevated levels of cadmium (above Res DEC) in a few samples in waste lines A and B and E, however concentrations were below CT DEP I/C DEC. Copper was detected > res DEC at sample WLDPE-3 in waste line E. TPH was detected > res DEC at WLDPE-6 in wasteline E. A sample from below manhole MH-7 contained chlorinated VOCs above CT DEP GB PMC. However, the sample was collected from below the water table, so PMC do not apply. Soil removal may be necessary if this area is determined to be an ongoing source of groundwater contamination.

JMG agrees with this assessment, and placement of an ELUR on the property will address the Res DEC exceedances. Additional delineation sampling of impacted soil surrounding manhole MH-7 and the associated concrete vault is planned to be conducted in January 2007 as per the Scope of Work provided to CT DEP in ERM's letter dated 18 October 2006. The level of PCE previously detected in sample MH-7 is indicative of a potential on-going source of groundwater contamination, and will likely require removal to comply with the RSRs. The results of the investigation and any remedial activities will be presented in detail in the next annual report for the Site, anticipated for March 2007.

D Plating Room (AOC 4): Elevated levels of VOCs, at levels > PMC, found in soils beneath floor. Additional sampling is necessary and removal of 20-30 cubic yards of soil will likely be necessary also. Sampling for SVOCs and TPH recommended, since they are likely commingled with the VOCs.

Based on the investigation work performed in the D Plating Room by HRP in 1998 and ERM in 2001, which included soil gas and soil sampling work, a section of the concrete floor in the northern portion of this room was removed on 16 January 2005, coinciding with the hot spot identified during the soil gas and soil sampling work. Upon removal of the floor, it appeared that the CVOC-impacted soil at this location was caused by a broken drain associated with the former plating line trench network. Screening results using a photo-ionization detector (PID) confirmed the presence of CVOCs in the sub-slab soils below and around this drain.

The impacted soil from below the removed portion of the floor was excavated on 17 January 2005 to a depth of 4.5 feet. Groundwater was not encountered in the excavation. Post-excavation soil samples were collected from the excavation sidewalls and base, directly below the former drain feature. The initial post-excavation soil sample from the northern side wall (AOC-4-S4) contained TCE at 2,120 µg/kg, above the GB PMC of 1,000 µg/kg. Additional soil was removed from this side wall and it was re-sampled on 10 February 2005. The TCE concentration (445 µg/kg) in the newly established sidewall was below the GB PMC and Industrial Commercial Direct Exposure Criteria (I/C DEC). The data generated during this effort have been tabulated and are attached for review (see Table 1).

No other CVOCs were present in any of the post-excavation samples in excess of the GB PMC or the Industrial/Commercial DEC. The area was backfilled with structural fill, compacted and the concrete floor was restored. No additional investigation or remediation activities are required to comply with the RSR except groundwater monitoring for a minimum of two years.

A Plating Room (AOC 5): One sub-slab HRP soil sample exceeded the I/C DEC for cadmium. This will be handled by an ELUR. Elevated levels of cadmium are within 1-2' of the slab and don't appear to extend deeper than 4'. Groundwater sampling will be performed as required by RSRs.

JMG agrees with EPA's assessment of this AOC. Metals, especially cadmium, were detected below the floor slab, along the former plating waste trench network. Metals concentrations in soil decrease with depth, reaching compliant levels before encountering the groundwater table. The soil is therefore inaccessible and environmentally isolated, as defined in the RSRs. An ELUR prohibiting residential use and identifying the presence of the Inaccessible and Environmentally Isolated soil below the floor slab will be used to demonstrate compliance. Groundwater monitoring will be required for a minimum of two years.

Former Tool and Press Room (AOC 6) - Consists of two connected rooms where tooling and press equipment was mounted on a concrete floor. Wastes produced included waste oils and TCA. Wood block flooring was removed. Concrete chip sampling and sub-slab soil sampling performed. No further action remedial appears necessary. 2 overburden wells planned within site building to address fluid media monitoring needs.

JMG generally agrees with EPA's assessment. Existing groundwater monitoring

points immediately outside and downgradient from the Site building (ERM-2, ERM-3 and MW-153) will provide the required fluid media confirmation, as opposed to wells inside the building.

Hazardous Waste Storage Area (AOC 7) - used for storage of plating room trench waste liquids, waste acids, waste strip solutions, waste TCE, waste oil, waste organic dye, and solder flux. Was used from 1974 to 1984. From 1984 to 1990, it housed a 1,000 gallon virgin TCA AST. Elevated levels of TPH were found in sediment in nearby catch basin CB-6, but these are thought to be related to truck traffic at the nearby loading dock. Removal of this sediment will be necessary.

The catch basin sediments were removed by ERM in 2001, and the material was disposed of along with the other hazardous waste generated during the removal of the former waste lines (AOC-3) and the landfill material (AOC-2). Investigation work completed previously was sufficient to characterize this AOC, and the levels of CVOCs detected in soil around the catch basin did not exceed the applicable RSR Criteria. Groundwater monitoring will be required for a minimum of two years.

Hazardous Waste Storage Building (AOC 8) - replaced the AOC 7 storage area in 1984. The adjacent exterior materials storage area was used from 1980 to 1993. The building consists of a concrete slab floor covered by a metal shed. Soil sampling has been conducted in the exterior materials storage area and found no exceedances. Additional soil sampling is needed under the storage building.

This small out-building was removed from the Site in January 2005 by Pace Construction, under direct oversight by ERM. The steel I-beams and aluminum siding were removed from the Site as scrap metal. The concrete slab was characterized for disposal by analyzing for VOCs by Method 8260B, PCBs by EPA Method 8082 and total RCRA 8 metals. The slab was broken up and removed from the Site in its entirety. No staining was noted on the concrete floor prior to its demolition.

Once the concrete slab was removed, five soil samples were collected and analyzed for the presence of VOCs. Previous sampling work in the exterior portion of this AOC detected the presence of VOCs (below criteria), but not metals, SVOCs or TPH. The January 2005 data is included in Table 2, attached hereto. The sub-slab soil sampling locations were focused on locations below the concrete slab where liquid-holding concrete vaults and bermed drum staging areas were located.

No evidence of a release of contaminants to soil below the floor was noted. There was no stained or otherwise discolored soil, and the soil did not generate positive PID responses when screened. The soil sample results indicated trace levels of CVOCs, including PCE, 1,1,1-TCA and TCE, all at levels well below the applicable soil criteria. A more detailed account of this AOC investigation, including detailed figures, will be presented as part of the next annual status report for the Site, which will be issued during March 2007.

Fuel Oil USTS (AOC 9) - A single walled 5,000 gallon #4 fuel oil UST and 15,000 gallon #6 fuel oil UST were installed on the southern side of the site building in 1957. In 1988, the 15,000 gallon UST was replaced by a new, double-walled15,000 gallon #4 fuel oil UST installed in the former UST grave. 4 soil samples were collected from side-walls of the grave during the 1988 replacement. Detectable levels of TPH were not present in sidewall samples. Soil sampling of the bottom of the UST graves and along current and former feed line trenches is necessary.

JMG is in the process of evaluating this UST area, including either removal or closure of the existing inactive UST in place. The scope of work to accomplish this was presented to CT DEP in ERM's letter dated 18 October 2006, and the work is scheduled for January 2007. The results of the investigation of this AOC will be presented in the next annual status report, which ERM anticipates issuing to CT DEP and EPA in March 2007.

Former MOH sludge storage containers (AOC 10): Steel dumpster with cover used from 1984 to 1994 located on western side of building. This unit managed up to 200 yards MOH sludge per year. Four shallow soil samples collected from below the slab and adjacent pavement in 2002 did not detect any exceedances. Groundwater monitoring is recommended.

JMG agrees with EPA's assessment. An existing groundwater monitoring point (ERM-5) located immediately downgradient from this AOC will provide the required fluid media confirmation. Such monitoring will be required for a minimum of two years.

Closed, Unlined Surface Impoundments (AOC 11) - received 240,000 gpd plating waste waters beginning in 1965. Sludge was removed from the impoundments in 1987 in accordance with a DEP-approved closure plan. In April 2002, 9 soil samples were collected from 12 test pits from native sand representing former excavation limits. Results showed no exceedances except TPH which is thought to have resulted from asphalt in the backfill used when the units were closed. No additional investigation recommended, except groundwater monitoring using existing well network.

JMG agrees with EPA's assessment.

Former Concrete-Lined Surface Impoundments and material storage area. (AOC 12) - Two 10' by 20' by 3' concrete tanks on the west side of the site building. The interior and exterior storage area both had metal floors. 20 samples were collected from 11 borings in 2002. One sample collected adjacent to catch basin CB-9 contained VOCs> applicable criteria. TPH was detected > criteria in one sample and cadmium in 2 samples. During the investigation, a square vault with MOH sludge inside was located to the south of the impoundments with three associated pipes. Soil needs to be investigated around the vault and CB-9.

JMG generally agrees with EPA's assessment of the concrete vault portion of this AOC. Removal of the concrete vault containing residual MOH sludge is proposed as part of the Scope of Work presented to CT DEP in ERM's letter dated 18 October 2006. The results of additional investigation or remedial work will be presented in the next annual report for the Site, as mentioned above.

The compliance strategy for CB-9 is currently being assessed. Although an exceedance of the GB PMC for TCE and TPH was detected in one of 20 soil samples collected in this area, there are a number of potential compliance options available under the RSR program, including statistical averaging, natural attenuation or performing SPLP analysis. Also, the water table is high (3.25 feet below grade in 2002) in this portion of the Site, and the impacted soil below/adjacent to the catch basin may be below the seasonal high water table, in which case the PMC would not apply to this soil. This compliance evaluation will be documented in the upcoming annual report.

Former Aqualogic/Lancy Wastewater Treatment System (AOC 13) - This treatment system was installed in 1984. Concrete, sub-slab soil, and soil gas data has been collected. Cadmium was detected in 1 sub-slab soil sample > Res DEC. No further work is recommended except groundwater monitoring in accordance with RSRs using existing well network.

JMG agrees with EPA's assessment of this AOC.

Former Graver Wastewater Treatment System (AOC 14) - This treatment system operated from 1957 to 1984. From 1957 to 1965, treated effluent was discharged straight to Stubby Plain Brook (WHERE WAS DISCHARGE POINT). From 1965 to 1984, wastes were discharged to the drainage swale via the unlined surface impoundments. One soil gas sample exceeded proposed CT I/C VC. Soil gas and soil samples collected

beneath the slab. Some cadmium and copper concentrations exceeded RDEC but not I/C DEC. Groundwater quality will be monitored in accordance with RSRs. Plan is to address cadmium-impacted soil through placement of an ELUR.

The discharge point was AOC-1 (Drainage Swale). JMG agrees with EPA's assessment of this AOC. A Site-wide ELUR, prohibiting residential use, will address the cadmium exceedances. The previous soil gas data collected in this AOC in 1998 did not suggest the presence of a soil-borne source of CVOCs. An additional soil gas survey, as required by EPA, was performed on 20 & 21 December 2006 across the main portion of the Site building, including areas previously assessed for VOCs in soil gas. The results of this survey will be presented in the next annual status report.

Former Hazardous Materials Storage Area (AOC 15) - Was used to store flammable materials, including kerosene and various alcohols. Soil gas and soil samples collected in this AOC reported no exceedances. Groundwater monitoring will be performed as required under RSRs.

JMG agrees with EPA's assessment of this AOC. Existing wells (ERM-2 and BR-2) will provide data to comply with fluid media confirmation requirements under the RSRs.

Loading Docks (AOC 16) - Soil sampling has not been performed, but surface run-off enters catch basin CB7, which was investigated as part of AOC-7 and no elevated contaminants found. Groundwater will be monitored using existing well network.

JMG agrees with EPA's assessment of this AOC. AOC-16 will be merged with AOC-7, and documented in the next status report to be issued in March 2007.

We trust these responses provide the information requested by EPA. Should you have any questions or require further clarification, please feel free to contact us at your convenience.

Very truly yours,

James L. Pfeifer, LEP
Senior Project Manager

for

Michael B. Teetsel, CPG
Principal

Table 1: AOC-4 Soil Data Analytical Results
80 Wampus Lane
Milford, CT

AOC	Res DEC	I/C DEC	GB PMC	AOC-4	AOC-4	AOC-4	AOC-4	AOC-4	AOC-4	AOC-4**	AOC-4
Sample ID				AOC-4-S1	AOC-4-S2	AOC-4-S3	AOC-4-S4	AOC-4-S5	Pile-S6	Concrete S-7	AOC4-PEN
Lab ID				SA23475-01	SA23475-02	SA23475-03	SA23475-04	SA23475-05	SA23475-06	SA23475-07	SA24123-06
Date Collected				1/27/05	1/27/05	1/27/05	1/27/05	1/27/05	1/27/05	1/27/05	2/10/05
VOCs (ug/kg)											
Acetone	500,000	1,000,000	140,000	BRL	BRL	BRL	BRL	BRL	BRL	BRL	BRL
cis-1,2-Dichloroethene	500,000	1,000,000	14,000	248.0	169.0	319.0	1,130.0	177.0	1,250.0	56.1	1,950.0
trans-1,2-dichloroethene	500,000	1,000,000	20,000	10.7	BRL	13.1	BRL	6.5	BRL	BRL	BRL
Ethylbenzene	500,000	1,000,000	10,100	BRL	BRL	BRL	BRL	BRL	122.0	855.0	BRL
Napthalene	1,000,000	2,500,000	56,000	BRL	BRL	BRL	BRL	BRL	BRL	172.0	BRL
1,1,1-Trichloroethane	500,000	1,000,000	40,000	82.6	BRL	100.0	1,950.0	110.0	818.0	246.0	686.0
Trichloroethene	56,000	520,000	1,000	40.7	406.0	213.0	**2120***	205.0	689.0	**1,040.0**	445.0
1,2,4-Trimethylbenzene	500,000	1,000,000	70,000	BRL	BRL	BRL	BRL	BRL	BRL	275.0	BRL
1,3,5-Trimethylbenzene	500,000	1,000,000	70,000	BRL	BRL	BRL	BRL	BRL	BRL	110.0	BRL
Tetrachloroethene	12,000	110,000	1,000	BRL	BRL	12.4	351.0	13.4	BRL	219.0	BRL
Toluene	500,000	1,000,000	67,000	BRL	BRL	BRL	BRL	BRL	BRL	114.0	BRL
1,2-Dichloroethane	6,700	63,000	200	5.8	BRL	BRL	BRL	BRL	BRL	BRL	BRL
1,1-Dichloroethane	500,000	1,000,000	14,000	86.3	BRL	52.9	264.0	27.4	179.0	BRL	534.0
m,p-Xylene	500,000	1,000,000	19,500	BRL	BRL	BRL	BRL	BRL	2,180.0	5,520.0	BRL
o-Xylene	500,000	1,000,000	19,500	BRL	BRL	BRL	BRL	BRL	1,120.0	2,240.0	BRL
Total Xylenes	500,000	500,000	19,500	BRL	BRL	BRL	BRL	BRL	3,300.0	7,760.0	BRL
PCBs by SW846 8082 (ug/kg)	1	10	0.005	NT	NT	NT	NT	NT	BRL	BRL	NT
SVOCs by SW846 8270 (ug/kg)											
Fluoranthene	1,000,000	2,500,000	56,000	NT	NT	NT	NT	NT	BRL	1,520.0	NT
Petroleum Hydrocarbons											
Total Petroleum Hydrocarbons (CT ETPH)	500	2,500	2,500	NT	NT	NT	NT	NT	BRL	**5,880.0**	NT
Total Metals (mg/kg) by EPA 200											
Barium	4,700	140,000	NA	NT	NT	NT	NT	NT	24.9	56.7	NT
Cadmium	34	1000	NA						6.2	151.0	
Chromium	100	100	NA	NT	NT	NT	NT	NT	15.3	93.3	NT
Lead	400	1000	NA						13.3	354.0	
Silver	340	10000	NA	NT	NT	NT	NT	NT	BRL	47.9	NT

Res DEC - Residential Direct Exposure Criteria
I/C DEC - Industrial/Commerical Direct Exposure Criteria
GB PMC - GB groundwater area Pollutnat Mobility Criteria
BRL - Below Reportable Limit
NA - Not Applicable
NE - Criteria Not Established
NT - Not Tested
Bold and highlighted indicates an exceedence of the GB groundwater Pollutant Mobility Criteria
* - Additional soil was removed from the sidewall where this post-excavation sample was collected. The TCE Concentation in the subsequent sample collected (AOC4-PEN) was below the GB PMC
** - Waste Concrete Sample

Table 2: AOC-8 Soil Data
Analytical Results
80 Wampus Lane, Milford, CT

AOC	Res DEC	I/C DEC	GB PMC	AOC-8	AOC-8	AOC-8	AOC-8	AOC-8	AOC-8
Sample ID				AOC8-SS1	AOC8-SS2	AOC8-SS3	AOC8-SS4	AOC8-SS5	AOC8-CONC
Lab ID				SA24123-01	SA24123-02	SA24123-03	SA24123-04	SA24123-05	SA24123-07
Date Collected				2/10/05	2/10/05	2/10/05	2/10/05	2/10/05	2/10/05
VOCs (ug/kg)									
Acetone	500,000	1,000,000	140,000	534.00	188.00	BRL	150.00	115.00	BRL
cis-1,2-Dichloroethene	500,000	1,000,000	14,000	20.00	BRL	BRL	BRL	BRL	BRL
1,1,1-Trichloroethane	500,000	1,000,000	40,000	14.20	7.90	BRL	25.60	25.70	BRL
Trichloroethene	56,000	520,000	1,000	96.70	BRL	BRL	27.00	47.40	BRL
Tetrachloroethene	12,000	110,000	1,000	BRL	21.60	BRL	9.90	20.20	BRL
1,1-Dichloroethane	500,000	1,000,000	14,000	BRL	BRL	BRL	BRL	BRL	BRL
PCBs by SW846 8082 (ug/kg)	1	10		NT	NT	NT	NT	NT	BRL
Extractable Petroleum Hydrocarbons									
Total Petroleum Hydrocarbons	500	2,500	2,500	NT	NT	NT	NT	NT	83.80
Total Metals (mg/kg) by EPA Method 200									
Barium				NT	NT	NT	NT	NT	48.40
Chromium	100	100	NE	NT	NT	NT	NT	NT	21.30
Lead	400	1000	NE	NT	NT	NT	NT	NT	5.59

Res DEC - Residential Direct Exposure Criteria
I/C DEC - Industrial/Commerical Direct Exposure Criteria
GB PMC - GB groundwater area Pollutnat Mobility Criteria
BRL - Below Reportable Limit
NA - Not Applicable
NE - Criteria Not Established
NT - Not Tested